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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/783,355	02/20/2004	Sangkeun Rhee	H0004592 (4760)	7712

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EXAMINER	
ZACHARIA, RAMSEY E	

ART UNIT	PAPER NUMBER
1773	

DATE MAILED: 07/25/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/783,355	RHEE ET AL.	
	Examiner	Art Unit	
	Ramsey Zacharia	1773	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *23 May 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-42,45-48 and 50-61* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-42,45-48 and 50-61* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *20 February 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 23 May 2006 has been entered.

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim Rejections - 35 USC § 102

3. Claims 36-42, 45-48, 50, and 51 are rejected under 35 U.S.C. 102(b) as being anticipated by Hattori et al. (US 5,591,792).

Hattori et al. teach an adhesive composition employed in laminates for use as food packaging materials (column 1, lines 7-15). The composition comprises an ethylene polymer (A), a tackifier (B), and a block copolymer (C) (column 3, lines 10-24). The ethylene polymer (A) may be copolymer of ethylene and an α-olefin having 3-20 carbon atoms (column 3, lines 49-55). The tackifier (B) may be a petroleum resin, a rosin, a terpene resin, or a hydrogenated compound thereof (column 5, lines 25-32). The block copolymer (C) comprises a block of a vinyl aromatic hydrocarbon and a block of conjugated diene or hydrogenated product thereof in

an A-B-A structure (column 6, lines 22-34). Styrene is the preferred vinyl aromatic hydrocarbon (column 6, lines 35-39). Butadiene and isoprene are the preferred conjugated dienes (column 6, lines 40-43). Regarding claim 51, hydrogenated styrene-butadiene-styrene copolymer is the same as styrene-ethylene butylene-styrene copolymer. The composition comprises 40-98 wt% ethylene polymer, 1-59 wt% tackifier and 1-59 wt% block copolymer (column 8, lines 33-41).

Claim Rejections - 35 USC § 103

4. Claims 1-42, 45-48, and 50-61 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kim et al. (US 5,139,878) in view of Hattori et al. (US 5,591,792).

Kim et al. teach a multilayer film having high vapor and gas barrier properties comprising an adhesive layer between a fluoropolymer layer and a thermoplastic polymer layer (column 1, lines 12-17). Homopolymers and copolymer of chlorotrifluoroethylene are preferred for the fluoropolymer layer (column 3, lines 1-6). Suitable thermoplastic polymers for the thermoplastic polymer layer include polyolefins, polyesters, polyamides, and polystyrene (column 3, lines 7-40). In one embodiment, the adhesive layer comprises a modified polyolefin composition, such as a copolymer or ethylene and an α-olefin having between about 2-8 carbon atoms modified with an unsaturated carboxylic acid or anhydride thereof (column 4, line 64-column 5, line 23). The adhesive composition may further contain up to about 40 wt% of a thermoplastic elastomer, such as styrene/butadiene rubber or the like (column 5, lines 53-66). A preferred amount of modified polyolefin present in the adhesive composition is about 10-100 wt% (column 6, lines 9-20). The multilayer film is required to have a fluoropolymer layer, a thermoplastic layer, and an intervening adhesive, but may also comprise a five layer structure

with additional adhesive and thermoplastic layers on the other side of the fluoropolymer layer or any other variation of fluoropolymer and thermoplastic polymer layers (column 6, lines 42-54). The multilayer film may be formed by a coextrusion method such as one using a circular die for blown bubble films (column 7, lines 1-9). A blown Coextrusion through a circular die will result in the formation of a tube. The multilayer film may be uniaxially or biaxially oriented (column 7, line 66-column 8, line 17). The multilayer film may be used to form packaging for pharmaceuticals or foodstuffs (column 9, lines 1-9).

Regarding claims 31 and 32, while Kim et al. is silent as to the degree of orientation to which their multilayer film may be subjected, the degree of orientation is known to affect the oxygen permeability of polymer films (see Table 3 on page 175 of Volume 16 of the Encyclopedia of Polymer Science and Engineering - attached as support for this contention). That is, the degree of orientation is a results effective variable. As such, it would have been obvious to one having ordinary skill in the art at the time the invention was made to optimize the degree of orientation, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2nd 272, 205 USPQ 215 (CCPA 1980).

Kim et al. do not teach that the adhesive composition comprises a tackifier in addition to the modified polyolefin and thermoplastic elastomer. However, the modified polyolefin may be a copolymer or ethylene and an α-olefin having between about 2-8 carbon atoms modified with an unsaturated carboxylic acid or anhydride thereof, the thermoplastic elastomer may be a styrene/butadiene rubber or the like, and the concentrations are taught as 10-100 wt% modified polyolefin and up to 40 wt% thermoplastic elastomer.

Hattori et al. teach an adhesive composition employed in laminates for use as food packaging materials (column 1, lines 7-15). The composition comprises a modified ethylene polymer (A), a tackifier (B), and a block copolymer (C) (column 3, lines 10-24). The modified ethylene polymer (A) may be copolymer of ethylene and an α-olefin having 3-20 carbon atoms (column 4, lines 20-23). The tackifier (B) may be a petroleum resin, a rosin, a terpene resin, or a hydrogenated compound thereof (column 5, lines 25-32). The block copolymer (C) comprises a block of a vinyl aromatic hydrocarbon and a block of conjugated diene or hydrogenated product thereof in an A-B-A structure (column 6, lines 22-34). Styrene is the preferred vinyl aromatic hydrocarbon (column 6, lines 35-39). Butadiene and isoprene are the preferred conjugated dienes (column 6, lines 40-43). The composition comprises 40-98 wt% ethylene polymer, 1-59 wt% tackifier and 1-59 wt% block copolymer (column 8, lines 33-41). Hattori et al. teach that the incorporation 1-59 wt% of the tackifier to their adhesive composition comprising a modified polyolefin and a styrene/diene elastomer improves the adhesive strength and moldability of the composition (column 8, lines 49-55).

One skilled in the art would be motivated to add 1-59 wt% of a tackifier to the adhesive layer of Kim et al. to improve the adhesive strength and moldability of the adhesive.

Regarding claims 12 and 52, Hattori et al. shows that polyolefins such as polypropylene, polyethylene, and cyclic olefin copolymers are known in the art as functionally equivalent materials for food packaging (column 9, lines 18-25). Therefore, because these two olefin polymers were art-recognized equivalents at the time the invention was made, one of ordinary skill in the art would have found it obvious to use a cyclic olefin copolymer as the polyolefin of

Kim et al., particularly since Kim et al. broadly teach the use of polyolefins such as polypropylene, polyethylene, and the like (see column 3, lines 23-27).

Regarding claims 16-18, Hattori et al. show that thermoplastic elastomers such as styrene/butadiene, styrene/isoprene/styrene, and hydrogenated styrene/butadiene/styrene are known in the art as functionally equivalent elastomer additives for adhesive compositions based on modified polyolefins (column 6, lines 22-43). Therefore, because these thermoplastic elastomers were art-recognized equivalents at the time the invention was made, one of ordinary skill in the art would have found it obvious to use styrene/isoprene/styrene or hydrogenated styrene/butadiene/styrene as the thermoplastic elastomer of Kim et al., particularly since Kim et al. broadly teach the use of thermoplastic elastomers such as styrene/butadiene rubber or the like (see column 5, lines 53-59).

Double Patenting

5. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

6. Claims 1-18, 28-30, 33-35, and 52-55 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-17 of copending Application No. 10/783,356. Although the conflicting claims are not identical, they are not patentably distinct from each other because the inventions of instant claims 1-18, 28-30, 33-35, and 52-55 represent a genus of which the inventions described by claims 1-17 of copending Application No. 10/783,356 are species. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993). Claims 1-17 of copending Application No. 10/783,356 represent a species of instant claims 1-18, 28-30, 33-35, and 52-55 since the claims of the copending application are drawn to a shaped article for storing a liquid food product, solid food product, medical product, or pharmaceutical product comprising a multilayer film having a fluoropolymer layer, an adhesive layer comprising an ethylene/α-olefin copolymer, a tackifier, and a styrenic block copolymer, and a thermoplastic polymer layer, while the instant claims are directed to the broader genus of a multilayered film comprising fluoropolymer layer, an adhesive layer comprising an ethylene/α-olefin copolymer, a tackifier, and a styrenic block copolymer, and a thermoplastic polymer layer.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

7. Claims 1-35 and 52-55 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-29 and 40-43 of copending Application No. 10/783,357 in view of Hattori et al. (US 5,591,792).

Claims 1-29 and 40-43 of copending Application No. 10/783,357 recite all the limitations of instant claims 1-35 and 52-55 except for the presence of a styrenic block copolymer in the adhesive composition which comprises an ethylene/α-olefin copolymer and a tackifier.

Hattori et al. teach that the addition of 1-59 wt% of a block copolymer comprises a block of a vinyl aromatic hydrocarbon and a block of conjugated diene or hydrogenated product to an adhesive composition comprising an olefin polymer, such as an ethylene/α-olefin copolymer, and a tackifier improves the adhesive strength of the composition (column 8, lines 49-51). Styrene is the preferred vinyl aromatic hydrocarbon, butadiene and isoprene are the preferred conjugated dienes, and the copolymer may have an A-B-A structure (column 6, lines 22-43).

One skilled in the art would be motivated to add 1-59 wt% of a styrene-diene-styrene block copolymer to the adhesive composition of claims 1-29 and 40-43 of copending Application No. 10/783,357 to improve the strength of the adhesive tie layer.

This is a provisional obviousness-type double patenting rejection.

Response to Arguments

8. Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection.

The rejections over Tasaka, Quinn et al., and Sato et al. have been withdrawn in view of the amendments to claim 36. The rejection over Tsai in view of Ikeda et al. has been withdrawn because Tsai et al. does not constitute prior art under 35 U.S.C. 102(e) because the applicants have invoked 35 U.S.C. 103(c), stating for the record that the Tsai et al. and the instant

application were commonly owned at the time of invention. It is noted however, that the effective filing date of Tsai et al. is 23 June 2000 and not 15 April 2004 as per 35 U.S.C. 121.

Conclusion

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ramsey Zacharia whose telephone number is (571) 272-1518. The examiner can normally be reached on Monday through Friday from 9 to 5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carol Chaney, can be reached at (571) 272-1284. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Ramsey Zacharia
Primary Examiner
Tech Center 1700